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EXAMINER

HAMILTON, MONPLAISIR G

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 09/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/679,456

Applicant(s)

RAGO, STEPHEN A.

Examiner

Monplaisir G Hamilton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10/04/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-9 and 11-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9 and 11-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-3,6-9 and 11-32 are pending.

***Claim Objections***

2. Claim 6 is objected to because of the following informalities: "claim 5" should be "claim 3". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5950203 issued to Stakuis et al, herein referred to as Stakuis as applied to claims 1-3, 6-9 and 11-32 above, and further in view of US Patent 5764972 issued to Crouse et al, herein referred to as Crouse.

Referring to Claims 1 and 11:

Stakuis discloses a system with a plurality of nodes, a peripheral device, a file system and a bypass mechanism (Abstract, lines 3-6). Stakuis further discloses the use of a bypass mechanism, which allows the client to directly access data from the peripheral device (col 2, lines 43-60). As disclosed by Stakuis, "...transfers by the bypass are made using the

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administrative information maintained by the file system relating to storage of such data on the peripheral". The description of the file system used to complete the bypass is read from a server.

Stakuis does not expressly disclose the claimed " b. reading a formal description of the file system by said client from said disc storage device, wherein said client can read and write data to and from said disc storage device without requiring further knowledge of said file system."

Crouse discloses an archiving file system that is completely transparent and which operates on remote files (Abstract, lines 7-13). Crouse's invention "uses a flexible control structure that is used for storing control information about the remote files as part of an addressable control file that has space on the data server" (col 4, lines 45-53; Fig 12). Crouse discloses that his invention uses a resource file to access data that is on a removable storage. The resource file is a data structure with the necessary information to manage the direct access of the remote file.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Stakuis to allow the reading of a "formal description" of the file system, which would allow the client to read and write data to the storage device. One of ordinary skill in the art would have been motivated to do this because it would allow storage and retrieval of large volumes of data across multiple types of secondary storage (col 1, lines 34-36).

Referring to Claims 2 and 12:

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Stakuis in view of Crouse discloses the limitations as discussed in Claim 1 and 11 above.

Crouse further discloses the use of Read Inode (col 23, lines 25; Fig 6)

Crouse does not expressly disclose the claimed "reading enough information to determine the physical block and offset containing a given file's inode given its mode number."

However, the use of the read inode command is essentially the same as the claimed limitation.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the teachings of Crouse. One of ordinary skill in the art would have been motivated to do this because it would allow storage and retrieval of large volumes of data across multiple types of secondary storage (col 1, lines 34-36). It is noted that the applicant's statement (page 11, lines 18-20) "1. The physical block and offset containing a files inode given its inode number. This is basically the "iread" algorithm found in the Unix file system drivers" is taken as an admission of prior art.

4. Claims 3, 6-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stakuis in view of Crouse as applied to claim 1, 11 and 2, 12 above, and further in view of Bach.

Referring to Claim 3, 13:

Stakuis in view of Crouse discloses the limitations as discussed in Claim 2 and 12 above.

Crouse further discloses the use of functions as specified in Bach: The design of the Unix® Operating System (col 23, lines 12-20). The bmap function takes an inode and a byte offset.

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Crouse does not expressly disclose the claimed “reading enough information to determine the block list of a given file given an offset into the file and a length.”

Bach discloses the use of bmap function (page 70, Fig 4.8), which is essentially the same as the claimed limitation.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to determine the block list by use of the bmap function. One of ordinary skill in the art would have been motivated to do this because it would allow storage and retrieval of large volumes of data across multiple types of secondary storage (col 1, lines 34-36). It is that the applicant statement (page 11, lines 21-22) “2. The block list given an offset into the file and a length. This is basically the “bmap” algorithm found in the Unix file system drivers” is taken as an admission of prior art.

Referring to Claim 6:

Stakuis in view of Crouse further in view of Bach discloses the limitations as discussed in claim 3 above. Stakuis further discloses the use of mount request and mount response (Fig. 3).

Referring to Claim 7:

Stakuis in view of Crouse further in view of Bach discloses the limitations as discussed in claim 6 above. Stakuis further discloses that the file mappings are stored in a virtual file that can be used to access the file on the device (col 3, lines 1-3, 20-25).

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Stakuis does not expressly disclose the claimed “formal description of the file system read in step b. is saved for future use when a read request or a write request is made by said client.”

However, the functionality disclosed by Stakuis is essentially the same as the claimed limitation.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the teachings of Stakuis. One of ordinary skill in the art would have been motivated to do this because it would enable the system to access the stored information for subsequent requests to the same unit (col 3, lines 20-25).

Referring to Claim 8, 14:

Stakuis in view of Crouse further in view of Bach discloses the limitations as discussed in claim 7 and 13 above. Stakuis disclose that his configuration is scalable (col 4, lines 48-52; Fig 1).

Stakuis does not expressly disclose the claimed “disc storage device is located in a Storage Area Network (SAN).”

However, the environment disclosed by Stakuis is essentially the same as the claimed SAN.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the teachings of Stakuis. One of ordinary skill in the art would have been motivated to do this because it would allow high speed transfer of data (col 4, lines 55-65).

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Referring to Claim 9, 15:

Stakuis in view of Crouse further in view of Bach discloses the limitations as discussed in claim 7 and 13 above. Stakuis further discloses that the bypass can occur on the server side (col 3, lines 5-20)

Stakuis does not expressly disclose the claimed “client is located in said server”.

However, Stakuis discloses that the server can act as a client. This is essentially the same as the claimed limitation.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the teachings of Stakuis. One of ordinary skill in the art would have been motivated to do this because it would allow the server to use the bypass mechanism (col 3, lines 5-20).

### ***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 16-32 are rejected under 35 U.S.C. 102(a) as being anticipated by US Patent 5950203 issued to Stakuis.

Referring to Claim 16, 20, 25, 28:

Stakuis disclose a method for reading or writing data from a storage source comprising (Figure 1, 2; Abstract, lines 1-2): acquiring a description of a file system associated with a storage resource (col 2, lines 50-51); and reading or writing directly to the storage resource based on the description (col 2, lines 45-50).



Referring to Claim 17, 21, 26, 29:

Stakuis discloses the limitations as discussed in Claim 16, 20, 25, 28 above. Stakuis further discloses a method for reading or writing data blocks associated with the file system (col 2, lines 65-68; col 3, lines 1-3).

Referring to Claim 18, 23, 31:

Stakuis discloses the limitations as discussed in Claim 16, 22, 30. Stakuis further discloses a method further including: determining a block and an offset associated with a file on said file system based on a file identifier (applicant's disclosure as prior art page 11, line 20 – iread function). This is function that is commonly used in Unix (col 2, lines 40-43).

Referring to Claim 19, 24, 32:

Stakuis discloses the limitations as discussed in Claim 18, 22, 30. Stakuis further discloses a method further including: determining a block list associated with a file based on an offset into the file and a length (applicant's disclosure as prior art page 11, line 22-bmap function). This is function that is commonly used in Unix (col 2, lines 40-43).

Referring to Claim 22, 27, 30:

Stakuis discloses the limitations as discussed in Claim 20, 25, 28 above. Stakuis further discloses an apparatus, which includes a computer configured to read and write files associated with the file system (col 3, lines 9-10; Fig 1)

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***Prior Art***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5832501 issued to Kain et al.

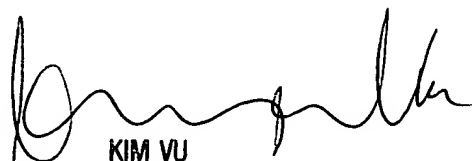
***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monplaisir G Hamilton whose telephone number is 1703-305-5116. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on 1703-305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are 1703-746-7239 for regular communications and 1703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 1703-305-3900.

Monplaisir Hamilton  
August 27, 2002

  
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